

Appl. No. 10/748,734
Amdt. Dated June 1, 2006
Reply to Office Action of March 7, 2006

Attorney Docket No. 88519.0001
Customer No. 26021

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A transparent electrode made up of ZnO as its main material, wherein its surface is covered with a Mg-doped ZnO film, and

wherein the electrode made up of ZnO as its main material is formed on a semiconductor layer, and

wherein the semiconductor layer comprises a GaN system semiconductor layer.

2-3. (Canceled)

4. (Currently Amended) ~~The transparent electrode of Claim 3,~~
A transparent electrode comprising:

a ZnO layer; and

an Mg-doped ZnO film formed on the ZnO layer,

wherein the ZnO layer is formed on a semiconductor layer, and

wherein the semiconductor layer comprises a GaN system semiconductor layer.

5. (Currently Amended) A transparent electrode comprising:

a ZnO layer; and

an Mg-doped ZnO film formed on the ZnO layer,

wherein the ZnO layer is formed on a semiconductor layer, and

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~~The transparent electrode of Claim 3,~~ wherein the semiconductor layer comprises an n-type GaN system semiconductor layer formed on a substrate, an emission layer formed on the n-type GaN system semiconductor layer, and a p-type GaN system semiconductor layer formed on the emission layer.

6. (Currently Amended) The transparent electrode of ~~Claim 2~~ Claim 4, wherein the Mg-doped ZnO film overlies an upper surface of the ZnO layer.

7. (Canceled)

8. (Currently Amended) The transparent electrode of ~~Claim 2~~ Claim 4, wherein a first metal pattern is formed on the Mg-doped ZnO film.

9. (Currently Amended) The transparent electrode of ~~Claim 3~~ Claim 4, wherein a second metal pattern is formed on the semiconductor layer.

10. (Currently Amended) The transparent electrode of ~~Claim 2~~ Claim 4, wherein the Mg-doped ZnO film improves acid resistance of the transparent electrode.

11. (Currently Amended) The transparent electrode of ~~Claim 3~~ Claim 4, wherein the semiconductor layer is formed on a substrate.

12. (Canceled)

13. (Currently Amended) A light emitting device comprising:
a semiconductor layer formed on a substrate;
a ZnO transparent electrode formed on the semiconductor layer; and
an Mg-doped ZnO film formed on the ZnO transparent electrode.

~~The light emitting device of Claim 12,~~ wherein the semiconductor layer comprises a GaN system semiconductor layer.

14. (Currently Amended) A light emitting device comprising:

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a semiconductor layer formed on a substrate;
a ZnO transparent electrode formed on the semiconductor layer; and
an Mg-doped ZnO film formed on the ZnO transparent electrode.

~~The light emitting device of Claim 12,~~ wherein the semiconductor layer comprises an n-type GaN system semiconductor layer formed on the substrate, an emission layer formed on the n-type GaN system semiconductor layer, and a p-type GaN system semiconductor layer formed on the emission layer.

15. (Currently Amended) The light emitting device of ~~Claim 12~~ Claim 13, wherein the Mg-doped ZnO film overlies an upper surface of the ZnO transparent electrode formed on the semiconductor layer.

16. (Canceled)

17. (Currently Amended) The light emitting device of ~~Claim 12~~ Claim 13, wherein a first metal pattern is formed on the Mg-doped ZnO film.

18. (Currently Amended) The light emitting device of ~~Claim 12~~ Claim 13, wherein a second metal pattern is formed on the semiconductor layer.

19. (Currently Amended) The light emitting device of ~~Claim 12~~ Claim 13, wherein the Mg-doped ZnO film improves acid resistance of the light emitting device.

20-25. (Canceled)